

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A guest-host polarizer comprising an oriented polymer film including an oriented polymerized liquid crystal host and a dichroic light-absorbing guest dispersed and oriented in the host, the oriented polymer film having a dichroic ratio of about 15 or more;

wherein the orientation of the oriented film is or corresponds to the orientation of a smectic phase S_X wherein the smectic phase S_X is not smectic A phase or smectic C phase.

2. (Original) A guest-host polarizer as claimed in claim 1 wherein the oriented polymerized liquid crystal host is obtained by polymerizing an oriented polymerizable liquid crystal.

3. (Cancelled)

4. (Previously presented) A guest-host polarizer as claimed in claim 1, wherein the oriented polymer film has a film thickness of about 10 μm or less.

5. (Previously presented) A guest-host polarizer as claimed in claim 1, wherein the dichroic light-absorbing guest is a blue absorbing dichroic colorant and the polarizer further comprises a thin film obtained from a perylene-based, naphthalene-based or anthraquinone-based lyotropic liquid crystal or combination thereof.

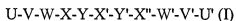
6. (Withdrawn) A liquid crystal cell comprising a substrate, a liquid crystal layer and a guest-host polarizer as claimed in claim 1.

7. (Withdrawn) The liquid crystal cell of claim 6 wherein the guest-host polarizer is arranged between the liquid crystal layer and the substrate.

8. (Withdrawn) A liquid crystal cell as claimed in claim 7 wherein at least one of a compensation layer, a retarder layer, a color filter layer and a viewing angle layer or other optical layer is arranged between the substrate and the liquid crystal layer.

9. (Withdrawn) A polymerizable liquid crystal for use in the manufacture of an oriented polymer film, the polymerizable liquid crystal having a smectic phase S_X where X is not A or C, with the exception of trans-1-[4-[6-(acryloyloxy)hexyloxy]cyclohexanecarboxyl]-4-[4-[6-(acryloyloxy)hexyloxy]benzoyloxy]benzene.

10. (Withdrawn) A polymerizable liquid crystal as claimed in claim 9, wherein the polymerizable liquid crystal is one of the formula I



wherein

X, X' and X'' are each, independently of one another, Ph or Cy;

where Ph is a 1,4-phenylene unit and Cy is a trans 1,4-cyclohexylene unit;

Y, Y' are each, independent of one another, $-\text{CH}_2\text{CH}_2-$, $-\text{CH}_2\text{O}-$ or $-\text{OCH}_2-$, $-\text{OCO}-$, $-\text{COO}-$, $-\text{N}=\text{N}-$, $-\text{C}=\text{C}-$, $-\text{C}\equiv\text{C}-$, $-\text{C}=\text{N}-$; U, U' are each, independent of one another, a polymerizable group or U is a polymerizable group and $\text{U}' = \text{H}$ or $\text{U} = \text{H}$ and U' is a polymerizable group;

V, V' are each, independent of one another, a spacer; and

W, W' are each, independent of one another, a direct bond, $-\text{O}-$, $-\text{S}-$, $-\text{COO}-$, or $-\text{OCO}-$; with the proviso that if X, X' and X'' are each Ph then Y' is $-\text{CH}_2\text{CH}_2-$, $-\text{CH}_2\text{O}-$ or $-\text{OCH}_2-$ and/or at least of one X, X' or X'' is Ph.

11. (Withdrawn) A polymerizable liquid crystal as claimed in claim 10, wherein X is Ph, X' is Ph and X'' is Cy or X is Ph, X' is Cy and X'' is Ph.

12. (Withdrawn) A polymerizable liquid crystal as claimed in claim 11, wherein X, X' and X'' are each, independently of one another, Ph and Y' is $-\text{CH}_2\text{CH}_2-$, $-\text{CH}_2\text{O}-$ or $-\text{OCH}_2-$.

13. (Withdrawn) A polymerizable liquid crystal thin film forming composition comprising a polymerizable liquid crystal as claimed in claim 9, and at least one of a polymerization initiator, a photo-initiator, a polymerization inhibitor, a preservative and a surfactant for adjusting the tilt angle adopted by the polymerizable crystal at a surface when a thin film is formed on such surface.

14. (Withdrawn) An oriented polymer film including a polymerized liquid crystal obtainable by polymerizing an oriented polymerizable liquid crystal as claimed in claim 9, or trans-1-[4-[6-(acryloyloxy)hexyloxy]cyclohexanecarboxyl]-4-[4-[6-(acryloyloxy)hexyloxy]benzoyloxy]benzene.

15. (Withdrawn) A method of manufacturing a guest-host polarizer comprising an oriented polymer film including an oriented polymerized liquid crystal host and a dichroic light-absorbing guest dispersed and oriented in the host, the oriented polymer film having a dichroic ratio of about 15 or more, the method comprising:

- providing a thin film of a polymerizable liquid crystal host and, dispersed therein, a dichroic light-absorbing guest;

- orienting the polymerizable liquid crystal host and the dichroic light-absorbing guest to obtain an oriented thin film of oriented polymerizable liquid crystal host and a dichroic light-absorbing guest dispersed and oriented in the host, the oriented thin film having a dichroic ratio of about 15 or more;

- polymerizing the polymerizable liquid crystal host in the oriented state to obtain an oriented polymer film including an oriented polymerized liquid crystal host and a dichroic light-absorbing guest dispersed and oriented in the host, the oriented polymer film having a dichroic ratio of about 15 or more.